

**TECHNICAL MANAGEMENT TEAM
MEETING NOTES
July 11, 2001
CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM
HOUSE
PORTLAND, OREGON**

TMT Internet Homepage: <http://www.nwd-wc.usace.army.mil/TMT/index.html>

DRAFT

FACILITATOR'S NOTES ON FUTURE ACTIONS

Facilitator: Richard Forester

The following notes are a summary of issues that are intended to point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the “record” of the meeting, only a reminder for TMT members.

Dworshak/Hungry Horse Operations:

Rudd Turner reported that Dworshak inflows are dropping, but operations continue as developed at the last meeting. RCC authorized up to a 2 kcfs flow reduction if required due to transmission limitations, although a reduction has not been necessary to date. Discharge should remain at full powerhouse capacity (*circa* 9.7 kcfs) until July 22. The COE and BPA are in constant coordination relative to this operation; RCC can modify teletypes if needed due to transmission problems.

Tony Norris reported that Hungry Horse discharge was reduced to 500 cfs as requested by TMT. The BOR indicated that 1000 cfs flows remain consistent with the 3540' end of August elevation and projected minimum flows at Columbia Falls through August. The question was asked whether to return Hungry Horse flows to 1000 cfs. The difference between 1000 and 500 cfs at Hungry Horse is equal to approximately 15MW, which BPA said should be manageable under the transmissions constraints. Flathead Lake users, through a PP&L Montana proposal, are asking for to keep the lake at recreational levels using Hungry Horse. This issue has been pressed at Dept of Interior in DC through the Montana Congressional delegation. Jim Litchfield will talk to Montana regarding this issue. It was agreed in the meantime, to hold Hungry Horse at 500 cfs in order to meet Columbia Falls minimum, reach 3540' at the end of August, assist with Dworshak operations, and implement the NMFS BiOp to benefit mainstream Columbia fish.

ACTION: Maintain Hungry Horse at 500 cfs and review the decision at subsequent TMT meetings as necessary. Tony will email Rudd and Cindy if new developments with this proposal occur before next week. Dave Wills will also report if bull trout are an issue.

Power Transmission Status:

John Anasis (BPA Transmission group) reported that there was an approval for increased transfer limits in lighter load hours. A combined 600 MW is being used over Hungry Horse, Albeni Falls, Libby and Dworshak. BPA has picked up non-firm energy and Anasis said they could handle a small increase in generation (i.e. Hungry Horse). Transfer limits should remain through the summer and Anasis expects no change over the next week. As there is not a lot of headroom, if f generation picks up significantly we may experience curtailment. Dworshak will have to be monitored for transmission conflict issues. A major line going down would require significant adjustments to work around the resulting constraint issues. More discussion will continue at next week's face-to-face meeting.

SOR 2001-9

The Salmon Managers (all except Montana) asked that Grand Coulee discontinue refill and draft so that the reservoir reaches 1280' by July 22. This request was justified by the critical passage period for the subyearling chinook, during which flows at McNary have decreased dramatically over this week, averaging 83.34 kcfs over past five days, in comparison to the 200 kcfs summer flow objective contained in the 2000 BiOp. Scott Bettin said BPA will stop filling and keep this goal in mind, but does not anticipate getting down to 1280' before July 31. One of the problems with the July 22 request is that BPA feels it cannot afford to sell surplus generated by the more rapid draft, in a manner that will allow them to store and make the necessary purchases later. The fish managers continued to stress the benefits of front loading Grand Coulee flows as being most beneficial to the current migration.

The ensuing discussion disclosed new reliability calculations based on 28,000 MW-months of storage capacity needed by 10/1/01 meet long-term reliability needs.

ACTION: TMT asked for a BPA presentation on the 28,000 MW-months storage/reliability topic at the next face-to-face TMT meeting. BPA agreed to do this.

July Final Water Supply Forecast:

Rudd reported that, following a TMT request at last week's meeting, a July Final water supply forecast was issued Monday by the River Forecast Center. The July Final moved slightly upward to 54.7 MAF, from the early-bird volume of 53.9 MAF (based on January - July at The Dalles). The downward trend in forecasts remains at approximately 1 MAF per month. Actual January - July calculations will be available in August.

McNary:

An electrical failure that affected the Oregon adult fish ladder at McNary resulted in a forebay regulation for a one-foot operating range. Also, the weekends of July 21/22, 27-29, and August 4/5 call for the upper one-foot operating range for recreational purposes. This will hold McNary forebay between 339 and 340.

Temperatures: Temperatures are rising with 75F recorded at LWG forebay and 68 at tailwater, and 68F – 72F in the McNary forebay and 67F in the tailwater.

Next Face-to-Face Meeting July 18, 9-12:

Agenda items:

- Dworshak and Hungry Horse Updates

- Power Transmission Status
- System Operations Update
- Grand Coulee Update
- Libby Operation Proposal (Jim Litchfield)
- Water Management Plan – Emergency Protocols
- Temperature Conditions
- 28,000 MW/months Presentation – BPA

1. Greeting and Introductions

The July 11 Technical Management Team conference call, held at the Customs House in Portland, Oregon, was chaired by Rudd Turner of the Corps and facilitated by Richard Forester. The following is a distillation, not a verbatim transcript, of items discussed at the meeting and actions taken. Anyone with questions or comments about these minutes should call Turner at 503/808-3935.

Forester welcomed everyone to the meeting, then led a round of introductions and a review of the agenda.

2. Dworshak and Hungry Horse Operations.

At last week's meeting, said Turner, we discussed upcoming operations at Dworshak and Hungry Horse Dams in light of power transmission limitations across the West of Hatwai cutplane; the action agencies agreed to update the TMT on the operation of those projects at today's meeting. Dworshak elevation, as of midnight last night, was 1581.8, down about 5 feet over the past week. Inflows to the project have now dropped to less than 2 Kcfs, with outflows of 9.7 Kcfs, full powerhouse capacity, Turner said. He added that Dworshak outflow was increased to 7 Kcfs on the morning of Thursday, July 4; discharge was increased to full powerhouse capacity on Saturday morning, July 6. Turner added that the Reservoir Control Center has issued a teletype authorizing a reduction in Dworshak outflow of up to 2 Kcfs if needed to alleviate the transmission system problem; however, that has not yet been necessary.

Tony Norris reported that Hungry Horse experienced a lightening operation over the weekend, with outflows from the project increasing to 2 Kcfs+ for a few hours, then reducing to the current discharge volume of 500 cfs. Hungry Horse elevation is currently 3542.8 feet, with inflows in the 1-3 Kcfs range.

What's the status of the Hungry Horse releases? Paul Wagner asked. My understanding is that PP&L Montana is refusing to pass that water through Flathead Lake, Norris replied; for that reason, it doesn't seem too beneficial to release any additional water from Hungry Horse at this time.

Lance Elias of PP&L Montana said the Montana Congressional delegation has received a lot of pressure from local residents to fill Flathead Lake, which is currently 1.8 feet below full pool at a time when it would normally be full. Senator Burns has been in

contact with the Department of the Interior, Elias said, and was told that the situation will be resolved. Interior asked PP&L Montana to develop a proposal about how to resolve this situation, Elias said; our proposal was to increase discharge from Hungry Horse enough to allow us to meet minimum flows downstream and add half a foot of storage to Flathead Lake. I don't know the status of that proposal, however, Elias said.

We thought that, by releasing 1.5 Kcfs beginning several weeks ago, we would barely be able to meet the August 31 BiOp elevation of 3540 feet at Hungry Horse, and still meet the Columbia Falls minimum, Norris said. If we're asked to provide more water out of Hungry Horse, he added, it will make it much more difficult to meet the Columbia Falls minimum. Elias noted that it may not be correct to say that PP&L Montana is unwilling to pass the additional Hungry Horse water through Flathead Lake; they were initially willing to do so, but he is unsure of the status of that issue, currently.

John Roache of the BOR said his understanding is that if Hungry Horse releases 1 Kcfs, the volume above minimum outflow (500 cfs) will be stored in Flathead Lake. That's probably true, at least until we find out what the Department of the Interior is going to do, Elias replied.

What is the Montana delegation's objective, in terms of lake elevation at Flathead? Cathy Hlebechuk asked. That's a great question, but I don't know the answer, Elias replied – again, our proposal was to increase Flathead Lake elevation by half a foot. And how much water would be required from Hungry Horse to accomplish that? another participant asked. One foot of Flathead lake elevation is equivalent to about five feet in Hungry Horse elevation, Norris replied; frankly, I would be very surprised if the Bureau is willing to approve that request. Wagner added that the 20-foot draft of Hungry Horse called for in the BiOp is intended to help anadromous fish in the Lower Columbia, not local recreators. It sounds like there are still a number of issues that need to be resolved regarding Hungry Horse operations, he said, but I don't think we can resolve them on this call.

3. Power Transmission Status Update.

John Anasis reported that BPA has now received permission from WSCC to increase the transfer limits in the West-of-Hatwai transmission corridor, which has helped the cutplane transmission situation, particularly during light-load and shoulder hours. The federal resources tend to be the ones that vary, because the private users have fixed demand, Anasis said. It looks as though, right now, local loads are high enough to absorb most of the daytime generation. At night, however, when loads drop, it's a different story – it looks as though; once we prorate available transmission capacity among all of the users, we have about 590 MW of light-load pathway usage to divide among the federal projects, which means we could need to curtail up to 90 MW of federal usage of the pathway.

So far, said Anasis, BPA's Power Business Line has been able to purchase enough non-firm transmission capacity to avoid any flow/generation reductions at

Dworshak. However, if generation picks up significantly, it will be more difficult to obtain excess capacity – we don't have much headroom, in other words, Anasis said. We're only talking about an increase in 15 MW if Hungry Horse discharge is increased from 500 cfs to 1 Kcfs, Wagner said. We should be able to accommodate that, Anasis replied – again, we have received an increase in transfer limits during nighttime hours, which will help. Once the weather begins to cool, that will help also, he said – the cooler the weather, the more capacity we have in the lines, because what we're trying to protect against is thermal overload.

What's the prognosis for the future? Turner asked – at least over the next week or two? I don't see any major changes over the next week, Anasis replied; the increased transfer limits should be good for the rest of the summer and into September, as long as the proper control schemes remain in place. After that, planning staff will be looking at how things will change once we move into the fall, Anasis said; again, the situation will improve as the weather cools.

The bottom line is that, over the next few months, we need to be able to back off Dworshak if necessary, said Scott Bettin – we hope that won't be necessary, but we need to have that in our back pocket. However, we will continue to purchase non-firm transmission capacity as long as it is available, he said.

The current teletype has removed the stipulation that Dworshak flows can be backed off, Turner said; however, we can put that back in if you need it. I would recommend that you do so, Anasis replied; if we lose a major line, we're looking at major curtailments for all users of the transmission pathway.

It sounds, then, as though we will continue to release full powerhouse capacity at Dworshak, with the understanding that if West of Hatwai transmission problems occur, Dworshak discharge could be curtailed by up to 2 Kcfs, Turner said.

What about Hungry Horse operations, said Turner – should TMT recommend increasing the discharge at that project to 1 Kcfs? Reclamation is fine either way, said Norris; to my way of thinking, however, if that extra water is just going to be trapped in Flathead Lake, it doesn't make much sense to release any more water than we have to at this time. NMFS agrees, said Wagner; it makes more sense to us to wait until August 1, then increase Hungry Horse discharge to 1.5 Kcfs.

Why don't we leave Hungry Horse discharge at 500 cfs for now, suggested Bettin; we can discuss this issue again at next week's TMT meeting. For the time being, then, it sounds as though Hungry Horse discharge will remain at 500 cfs, at least until next week's TMT meeting, Forester said. Does that work from a bull trout standpoint, for the Fish and Wildlife Service? Turner asked. Yes, David Wills replied. That operation also sounds reasonable from Montana's standpoint, Jim Litchfield said. If there are any new developments in the negotiations between Montana, Interior, PP&L and the Bureau of Reclamation, perhaps we can ask Tony Norris to send an email to the TMT membership, Turner said. Norris agreed to do so.

4. Other.

A. New SORs. On July 10, the action agencies received SOR 2001-9. This System Operational Request, prepared and supported by USFWS, NMFS, ODFW, IDFG, CRITFC and WDFW, requests the following specific operations at Grand Coulee Dam:

- Between now and July 22, discontinue refill and pass inflow from Grand Coulee, plus the additional volume of water stored between elevation 1280 feet and the present elevation of 1283.3 feet, to reach an elevation of 1280 feet by July 22. Based on inflows projected in the July 9 SSARR and the projected additional volume of 147.8 Ksf now in the reservoir, we estimate an average outflow from Grand Coulee of 72.4 Kcfs during this period.

Wagner spent a few minutes going through the contents of this SOR, the full text of which is available via the TMT's Internet homepage. Please refer to this document for full details and justification.

Bettin said it is highly unlikely that this volume can be drafted by July 22 without putting BPA in a surplus power position, which would be contrary to the federal operating strategy; it could also have adverse effects on our refill ability this winter, and our ability to meet load without purchasing, he said. However, said Bettin, we can keep this in mind as a goal.

Eric King of BPA provided a brief description of the most recent Power Planning Council load study, and its implications for system storage and winter power system reliability. Basically, BPA feels that we will need a total of 28,000 MW-months of storage as of October 1 to meet the reliability criteria in the Council's study, King said. That will require some refill once the BiOp's August 31 elevation targets are met, he added.

Your concern is the winter period? Wagner asked. That was the focus of the study, yes, King replied – December, January and February. Inflow assumptions are a key, said Turner – what water years were assumed? The 1944 and 1977 water years were used, Bettin replied.

If I understand, then, drafting Grand Coulee by July 22 could take you outside the elevation range needed to achieve 28,000 MW-months of storage by October 1, Wagner said. That, and it could put us into a surplus power condition, Bettin said. What does that mean, operationally? Forester asked. That Grand Coulee elevations will begin heading downward from here, Bettin replied; however, it is unlikely that the project will achieve the elevations requested in this SOR. In response to another question, he added that he expects to see Grand Coulee discharges in the 50 Kcfs-60 Kcfs range over the next two weeks.

In response to a question from Wills, Bettin said BPA is also concerned that if it goes into a surplus power condition to achieve the operations requested in this SOR, then has to purchase power for the last week of July, there is no guarantee that the energy needed will even be available, given typical late-July temperatures on the West Coast.

Can we at least avoid any sharp drop-offs in weekend flows? David Wills asked – after all, the fish don't take the weekends off. We'll do the best we can, Bettin replied – I don't think you'll see flow reductions as sharp as they've been earlier in the season.

What do you expect flows at McNary to be in August? Margaret Filardo asked. About what they are now, Bettin replied – somewhere between 90 Kcfs and 100 Kcfs. Again, our plan is to draft Grand Coulee to elevation 1280 by July 31. The most beneficial use of the Grand Coulee water, from a biological standpoint, would be for the operating agencies to front-load the release of the water, to the greatest extent possible, Wagner said. We understand, and will do our best to accommodate this request, Bettin replied.

That would be helpful, because at this point, the subyearling migration has pretty much stopped, Filardo said. Do you have a sense of how many fish have yet to pass McNary? Turner asked. We hope there are still a lot of fish above McNary, Filardo replied; however, if they don't get out soon, they won't get out at all this year. Chris Ross added that, according to historical passage records, the 80% subyearling passage point at McNary occurs around the end of July, so there should still be substantial numbers of fish above McNary. Wills added that the higher flows will benefit fish in the lower river downstream of McNary as well.

The action agencies would like to provide more water, said Bettin; however, as everyone is aware, the drought conditions are horrible this year. Again, we will front-load the available water to the greatest extent feasible, he said.

B. July Final Water Supply Forecast. Turner said the July Final water supply forecast for January - July at The Dalles is 54.7 MAF, up slightly from 53.9 MAF in the July early-bird forecast. Turner said he had talked to Harold Opitz at the RFC, who said that higher Canadian runoff not factored into the early-bird was one reason for this slight increase; the protracted nature of the 2001 runoff is the main reason the water supply forecast has continued to drop slightly every month of this year. This is because some volume is lost to infiltration, evaporation, and infiltration, and does not show up as surface runoff as much as in years where it comes off more quickly. At Lower Granite, the forecast is now only 9.9 MAF, just 47% of normal; at Libby, 3.57 MAF, 53% of normal; at Dworshak, 1.3 MAF, 53% of normal. And the good news is? Jim Litchfield asked. I'm afraid there isn't any, Turner replied.

C. McNary Operations. Just a heads-up, said Turner – there was an electrical failure at McNary yesterday that affected the upper portion of the Oregon-shore adult fish ladder; there is now a hard constraint in the project forebay regulation not to go below elevation 338, and to operate within a tight elevation range of one foot – elevation 338-

339, to maintain an acceptable flow through the ladder's fish exit area, he said. The project hopes to resolve the problem by later today, he added.

Also, the Columbia Cup hydroplane races are coming up the last two weeks in July; McNary forebay elevation will need to be maintained in the top foot, 339-340 feet. There will be another race, during which the same elevation will need to be maintained, the first weekend in August, as well, Hlebechuk added.

5. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, July 18 from 9 a.m. to noon. It was agreed that this will be a face-to-face meeting. Meeting notes prepared by Jeff Kuechle, BPA contractor.

LIST OF MEETING PARTICIPANTS

JULY 11, 2001

Name	Affiliation
John Anasis	BPA
Scott Bettin	BPA
Lance Elias	PP&L Montana
Margaret Filardo	FPC
Richard Forester	Facilitation Team
Russ George	Water Management Consultants Inc.
Richelle Harding	D. Rohr & Associates
Cindy Henriksen	COE
Cathy Hlebechuk	COE
Eric King	BPA
Jim Litchfield	Consultant (Montana)
Kyle Martin	CRITFC
Doug Marx	Attorney, Lake Pend Oreille Idaho Club
Tony Norris	USBR
Mike O'Bryant	Columbia Basin Bulletin

Steve Pettit	IDFG
Chris Ross	NMFS
Glen Traeger	AVISTA Energy
Rudd Turner	COE
Bill Tweit	WDFW
Paul Wagner	NMFS
Steve Wallace	PacifiCorp
David Wills	USFWS